Focused Site Inspection Prioritization Report

for the

Diamond International Corporation

USEPA ID No. ILD 980 683 197

August 23, 1995

Prepared for
U.S. Environmental Protection Agency
Contract 68-W8-0064
Work Assignment 32-5JZZ

For U.S. Environmental Protection Agency, Region V

Approved by: Alan Altshuler Date: 9/6/95

For Illinois Environmental Protection Agency

Approved by:_____ Date: _____

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1.0 Introduction

On December 13, 1994, Black & Veatch Waste Science, Inc., the Alternate Remedial Contracting Strategy (ARCS) V contractor, was authorized, by approval of the work plan amendment by the U.S. Environmental Protection Agency (USEPA) Region V, to conduct a focused site inspection prioritization (FSIP) of several sites in Illinois.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) established a federal program for responding to the risks posed by uncontrolled releases of hazardous substances. CERCLA required the federal government to establish criteria for setting priorities among releases or threatened releases, and specified these criteria be used to establish the National Priorities List. USEPA responded to these mandates by developing the Hazard Ranking System (HRS) to more accurately quantify the relative risk posed by hazardous waste substance releases. A revised HRS was published in December 1990.

The objective of the FSIP is to review the outstanding screening site inspections (SSIs), performed before the implementation of the revised HRS, for which a final decision has not been made regarding further action. The FSIP will determine whether existing SSI information meets a minimum standard to reflect the revised HRS, and, if not, collect additional information by file review, reconnaissance and sampling on an as-needed basis. The FSIP will evaluate the threats posed to human health and the environment and provide sufficient documentation for USEPA to decide the appropriate future course of action (no further remedial action planned [NFRAP], further evaluation, or preparation of an HRS package).

2.0 Site Background

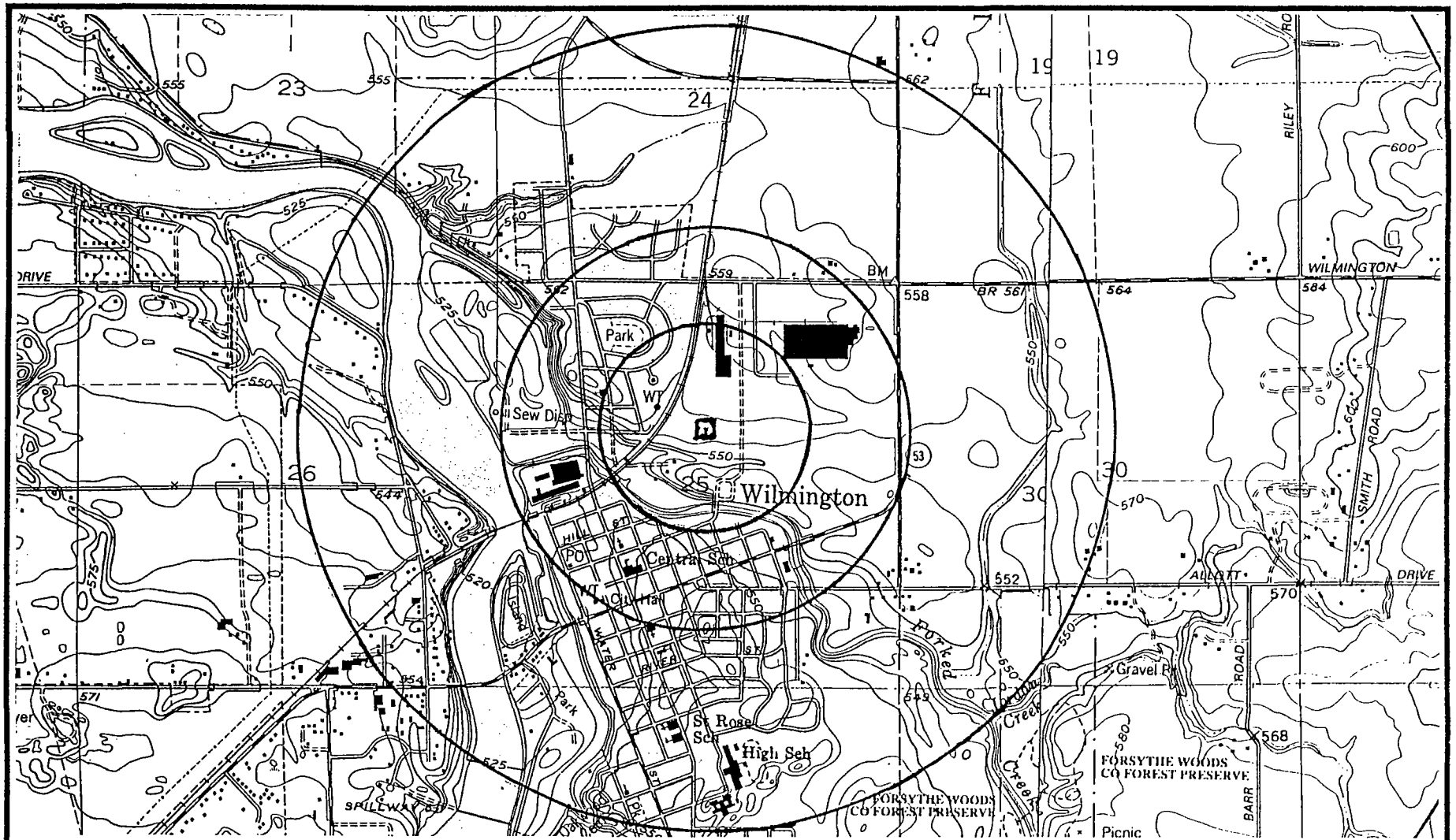
2.1 Site History

The Diamond International Corp. (Diamond) site is located in Wilmington, Will County, Illinois. The site is currently a storage facility for materials used in fertilizers manufactured by Phibro-Tech Inc. Figure 1 is a site location map; Figure 2 is a site sketch.

According to USEPA files, the Diamond site was formerly a paper products manufacturing center. The site was initially discovered by the Illinois Environmental Protection Agency. The site was submitted as a potential hazardous waste site because of the existence of three wastewater lagoons on the property.

Diamond International Corporation acquired the property from Johnson & Johnson in August 1973, and operated it until February 1, 1980. During this period, the plant manufactured paper. Wood pulp was converted to paper, and the paper was packaged at the plant and distributed by truck or rail. The lagoons were installed by Diamond to aid in the filtration of water used in manufacturing. Preliminary filtration occurred in the onsite building, where fibers and pulpy residues were removed from the water. The water was then pumped into lagoons for aeration and sediment settling. Occasionally, water that accumulated in the basement of the onsite building was pumped into the lagoons. The dimensions of one lagoon were 30 feet by 30 feet by 12 feet deep. The other two lagoons were approximately 30 feet by 10 feet by 12 feet deep. The lagoons were surrounded by a locked fence.

The facility was inactive from February 1980 until C.P. Inorganics purchased the property on June 21, 1986. The onsite building is used for warehousing; no other operations are active onsite. Surface impoundments are not in use. According to inventory lists, substances stored at the facility include nickel sulfate, nickel nitrate, nickel chloride, cupric chloride, thiourea, urea, sodium sulfide, Greens Keeper fertilizer, ferric chloride, ferric sulfate, ammonia chloride, copper carbonate cake, copper turquoise, new empty drums, and new pallets. No documented regulatory-related response activities have occurred at the site.



Source: USGS Wilmington Quadrangle, 1993	N	Figure 1 Site Location Map
Scale: 1: 24 000		Diamond International Corporation Wilmington, Illinois

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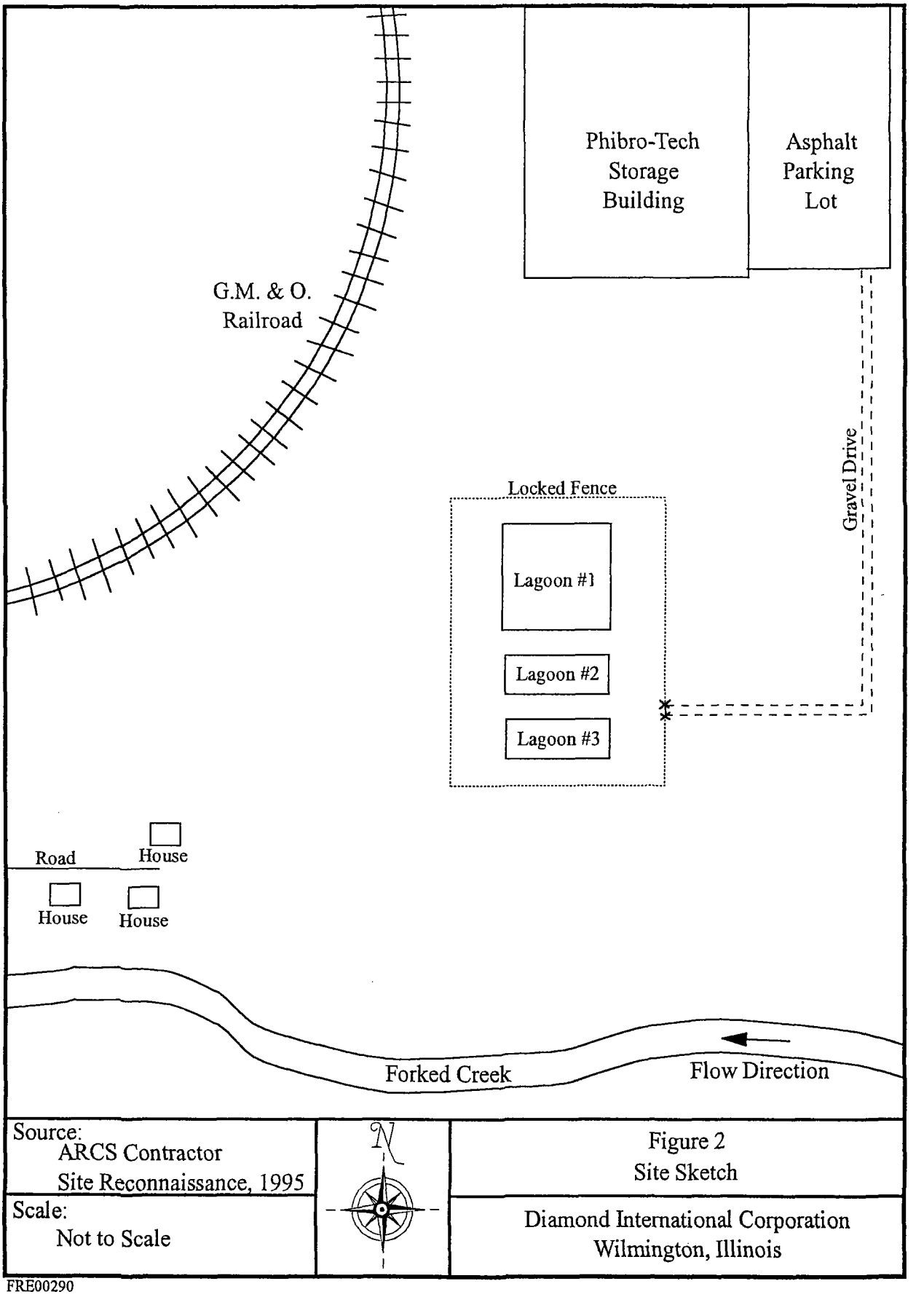

Source: ARCS Contractor Site Reconnaissance, 1995		Figure 2 Site Sketch
Scale: Not to Scale		Diamond International Corporation Wilmington, Illinois

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2.2 Past Site Characterization Studies

On May 3, 1986, a preliminary assessment was conducted at the site, which was submitted as a potential hazardous waste site because of the existence of wastewater lagoons on the property.

Five onsite surface soil samples were collected on October 27, 1987, during an SSI conducted by a USEPA Field Investigation Team contractor. Two surface soil samples (S1 and S2) were collected from the northern dry lagoon. One surface soil sample (S3) was collected in the southern dry lagoon. Two surface soil samples (S4 and S5) were collected downgradient from the lagoon area. Surface soil sample S6 was collected from the northern region of the site as a background sample. Elevated levels of acetone, copper, lead, and zinc were found in S1. S2 contained elevated levels of carbon disulfide, toluene, copper and zinc. S3 contained an elevated concentration of copper. In many cases, background sample S6 contained higher concentrations of volatile and semivolatile organic compounds and inorganic analytes than the release samples. A low priority for further inspection was recommended.

During 1993, C.P. Inorganics changed it's name to Phibro-Tech Incorporated.

In January 1995, the ARCS contractor began reviewing background data for the Diamond site.

2.3 FSIP Site Reconnaissance/Sampling

The ARCS contractor conducted a reconnaissance on February 27, 1995. Appendix A contains site photographs taken during the reconnaissance.

The site appeared stable. The surface lagoons had not been used since the 1970's, and Phibro-Tech Inc. had no plans to use them. An underground drainage tunnel, designed to drain lagoon overflow to the local sewer system, was sealed with an inflatable diaphragm. Water was observed in the larger lagoon; the two smaller lagoons were dry. The fence was still intact and locked. Vegetation surrounding the lagoons was thick and plush. There were no signs of stressed vegetation.

3.0 Pathway Evaluation

Records reviewed by the ARCS contractor indicate that site wastes are a possible source of contamination. The program evaluated four contaminant transport pathways: groundwater, surface water, soil exposure, and air.

3.1 Groundwater Pathway

The site hydrogeology consists of three aquifers (shallow, intermediate, and deep). The shallow aquifer is about 30 feet of glacial drift with sands and gravel above the Fort Atkinson limestone, which is between 5 and 50 feet thick. The intermediate aquifer consists of the Galena dolomite, Platteville dolomite, and St. Peter sandstone. The deep aquifer is comprised of the Ironton and Galesville sandstones, and is approximately 1,500 feet deep.

Area residents receive their water from either private or municipal groundwater wells. A review of Illinois State Water Survey database information suggests that all private wells are finished in the intermediate aquifer. Municipal wells are screened in the intermediate and deep aquifers.

The nearest drinking water well is located onsite and is screened in the intermediate aquifer. An estimated 7,172 people are served by wells within a 4-mile radius of the site.

3.2 Surface Water Pathway

Overflow from the surface impoundments was collected in a ditch that drained the lagoons into the local sewer system and eventually into Forked Creek; however, this route has been sealed with an inflatable diaphragm located in the sewer system approximately 300 feet west of the site. Property runoff from the remainder of the site flows overland to Forked Creek about 0.25 miles south of the site. Forked Creek continues for about 0.5 miles until it meets the Kankakee River. Forked Creek is a designated fishery with wetlands along its banks. The Kankakee River is a fishery; the Des Plaines Wildlife Conservation Area, Goose Lake Prairie State Park, and Heidecke Lake are sensitive environments located on the river's banks along the surface water pathway.

3.3 Soil Exposure Pathway

Surface soil samples indicate a release of volatile and semivolatile organic compounds and inorganic analytes; however, the site is surrounded by a fence, and no observed release was detected in samples downgradient of the lagoon area. There are an estimated 9 workers onsite. Approximately 5,187 people reside within 1 mile of the site.

3.4 Air Pathway

No air contamination has been documented or reported. No air samples have been collected at the site. Approximately 7,172 people live within a 4-mile radius of the site. Sensitive environments within a 4-mile radius include wetlands, two state designated threatened birds, four natural areas, and a state wildlife area.

4.0 Summary

The ARCS contractor conducted a thorough review of the available files associated with the Diamond International Corporation and conducted a site reconnaissance. Elevated concentrations were found in soil from the surface impoundments; however, it was concluded that site soils do not constitute a possible threat to nearby populations or sensitive environments. No observed release has been documented outside the impoundment area, and an overland flow route to the surface water pathway was not observed.

5.0 References

ARCS Contractor, Field Book of Reconnaissance Visit. February 27, 1995.

Ecology & Environment, Inc., Screening Site Inspection Report for Diamond International Corporation, January 26, 1986.

Illinois Environmental Protection Agency, Division of Public Water Supplies, Raw Source Location Report, 1992.

Illinois Natural Heritage Database, Lists of Illinois Natural Areas Inventory, Nature Preserves and Endangered and Threatened Species Groups by county, October 1994.

Illinois State Geologic Survey, Groundwater Possibilities in Northeastern Illinois, Circular 198, 1955.

Illinois State Geologic Survey, Geologic Map of Illinois, 1967.

Illinois State Geologic Survey, Quaternary Deposits of Illinois, 1979.

Illinois State Water Survey, Public Groundwater Supplies in Will County, Champaign, Illinois, 1983.

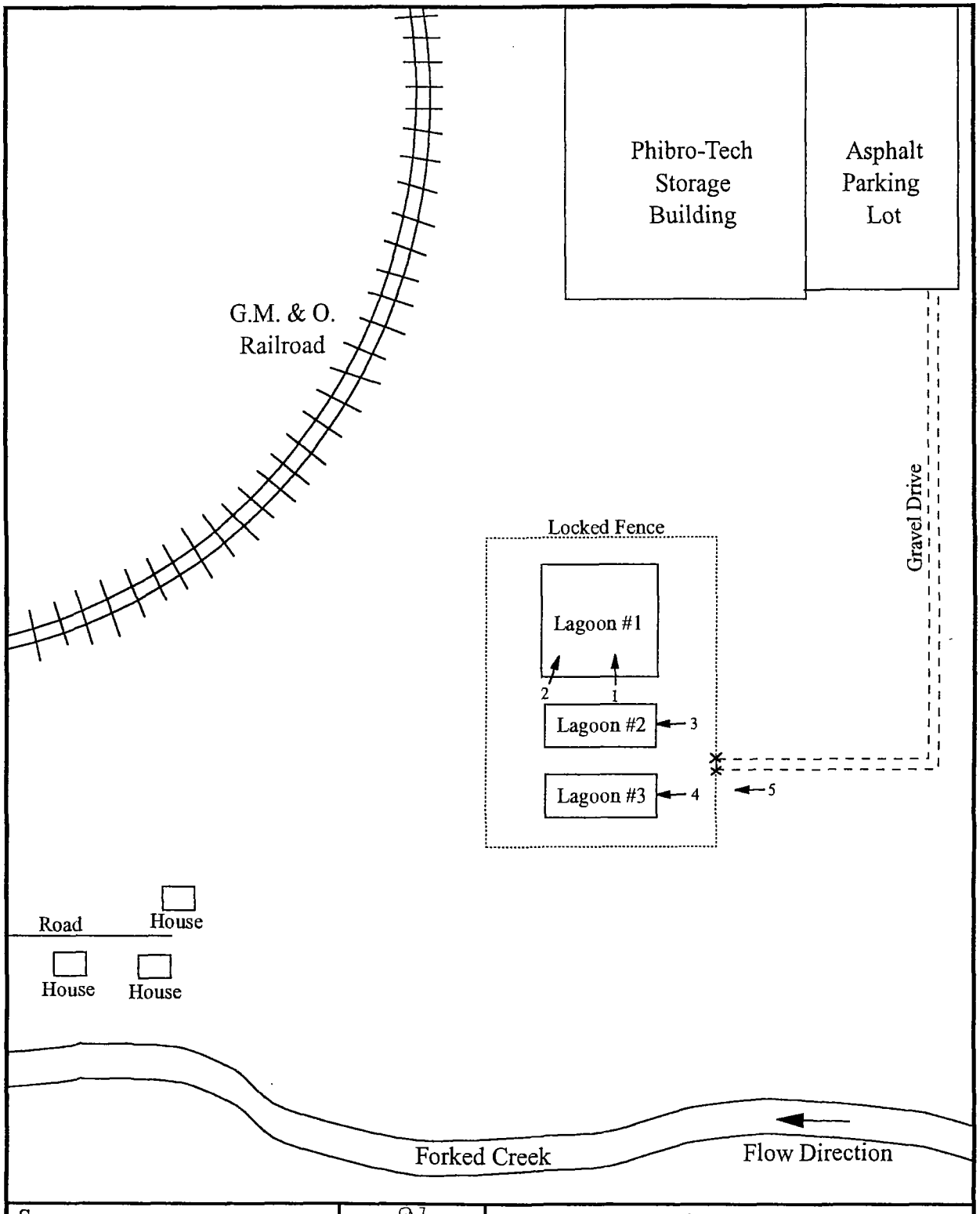
Illinois State Water Survey, printouts of PICS and Private Well databases, 1990.

U.S. Department of Commerce, 1990 Census of Population and Housing, Illinois.

U.S. Department of the Interior, National Wetlands Inventory, 7.5 Minute Quadrangle, Channahan, IL (1993); Minooka, IL (1993); Wilmington, IL (1993).

U.S. Geological Survey, 7.5 Minute Quadrangle Topographic Map, Wilmington, IL (1993); Minooka IL (1993).

Appendix A
Site Reconnaissance Photographs



Source: ARCS Contractor Site Reconnaissance, 1995		Figure A-1 Photograph Location Map
Scale: Not to Scale		Diamond International Corporation Wilmington, Illinois

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Date: 3/30/95

Time: 0910

Photo Taken By: John Noyes

Photo Number: 1

Location/ILD #: Diamond International Corporation/ILD 980 683 197

Direction: North

Description: Large lagoon with aerators, water, and rocky shore. Onsite storage building in background.

Date: 3/30/95

Time: 0913

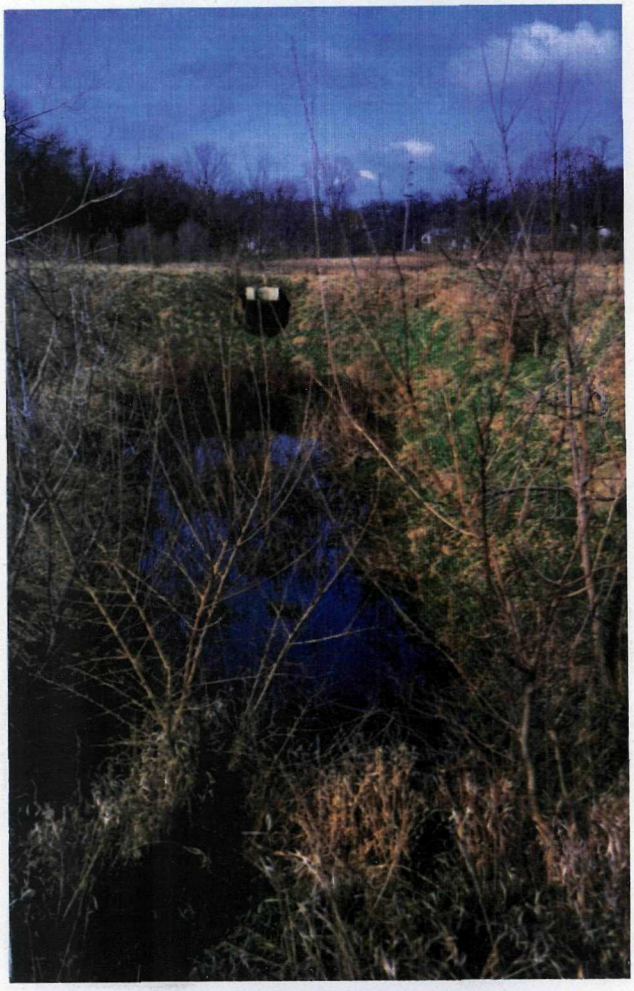
Photo Taken By: John Noyes

Photo Number: 2

Location/ILD #: Diamond International Corporation/ILD 980 683 197

Direction: Northeast

Description: Large lagoon with aerators, water, and rocky shore. Onsite storage building in background.



Date: 3/30/95

Time: 0915

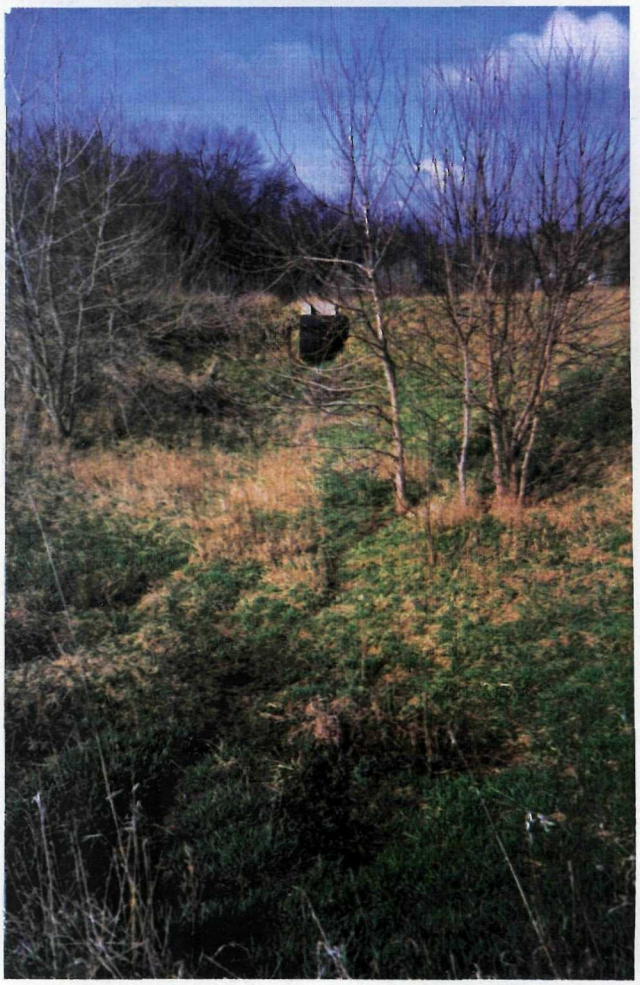
Photo Taken By: John Noyes

Photo Number: 3

Location/ILD #: Diamond International Corporation/ILD 980 683 197

Direction: West

Description: The first small lagoon. Note the standing water due to recent rains. Weir in background which leads to a sealed underground drainage pipe.



Date: 3/30/95

Time: 0918

Photo Taken By: John Noyes

Photo Number: 4

Location/ILD #: Diamond International Corporation/ILD 980 683 197

Direction: West

Description: The second small lagoon (south of the first small lagoon). No standing water. Weir in background which leads to a sealed underground drainage pipe.

Date: 3/30/95

Time: 0925

Photo Taken By: John Noyes

Photo Number: 5

Location/ILD #: Diamond International Corporation/ILD 980 683 197

Direction: West

Description: Gate and fence enclosing surface lagoons. Note berms inside fence surrounding each lagoon.